MET Cell Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	c-MET, Cell Lysate
Full Product Name	Canine c-MET HEK293 Overexpression Lysate
Product Gene Name	MET cell lysate
Product Synonym Names	Canine c-MET/HGFR HEK293 Cell Lysate (WB positive control); MET proto-oncogene, receptor tyrosine kinase
Sequence	Met1-Leu93 5
Host	HEK293 Cells
Form/Format	1x Sample Buffer (1x modified RIPA buffer+1x SDS loading buffer). Modified RIPA Lysis Buffer: 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 1mM EDTA, 1% Triton X-100, 0.1% SDS, 1% Sodium deoxycholate, 1mM PMSF.
Preparation and Storage	Store at 4 degree C for up to twelve months from date of receipt. After re-dissolution, aliquot and store at -80 degree C for up to twelve months. Avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt.
Molecular Weight	154,637 Da
Sequence Positions	922aa
3D Structure	ModBase 3D Structure for Q75ZY9
Species	Canine
Recommend Usage	1. Centrifuge the tube for a few seconds and ensure the pellet at the bottom of the tube.**2. Re-dissolve the pellet using 200uL pure water and boil for 2-5 min.**
Sequence Construction	A DNA sequence encoding the extracellular domain of canine MET (NP_001002963.1) (Met 1-Leu 935) was expressed, with a polyhistidine tag at the N-terminus.
Preparation Method	Cell lysate was prepared by homogenization of the over-expressed cells in ice-cold modified RIPA Lysis Buffer with cocktail of protease inhibitors. Cell debris was removed by centrifugation. Protein concentration was determined by Bradford assay (protein assay, Microplate Standard assay). The cell lysate was boiled for 5 min in 1 x SDS loading buffer (50mM Tris-HCl pH 6.8, 12.5% glycerol, 1% sodium dodecylsulfate, 0.01% bromophenol blue) containing 5% b-mercaptoethanol, and lyophilized.
Product Categories/Family for MET cell lysate	Cancer Drug Targets Receptor Tyrosine Kinases (RTKs)
Applications Tested/Suitable for MET cell lysate	Western Blot (WB)
Application Notes for MET cell lysate	WB: Use at an assay dependent dilution.
Related Product Information for MET cell lysate	Hepatocyte growth factor receptor (HGFR), also known as c-Met or mesenchymal-epithelial transition factor (MET), is a receptor tyrosine kinase (RTK) that is overexpressed and/or mutated in a variety of malignancies. HGFR protein is produced as a single-chain precursor, and HGF is the only known ligand. Normal HGF/HGFR signaling is essential for embryonic development, tissue repair, or wound healing, whereas aberrantly active HGFR has been strongly implicated in tumorigenesis, particularly in the development of invasive and metastatic phenotypes. HGFR protein is a multifaceted regulator of growth, motility, and invasion, and is normally expressed by cells of epithelial origin. Preclinical studies suggest that targeting aberrant HGFR signaling could be an attractive therapy in cancer. This Canine c-MET overexpression lysate was created in HEK293 Cells and intented for use as a Western blot (WB) positive control. Purification of c-MET protein from the overexpression lysate was verified.

Product References and Citations for MET cell lysate	McGill GG, et al. (2006) c-Met expression is regulated by Mitf in the melanocyte lineage. J Biol Chem. 281(15): 10365-73. Garcia S, et al. (2007) c-Met overexpression in inflammatory breast carcinomas: automated quantification on tissue microarrays. British journal of cancer. 96(2): 329-35. Socoteanu MP, et al. (2008) c-Met targeted therapy of cholangiocarcinoma. World J Gastroenterol. 14(19): 2990-4. Kong DS, et al. (2009) Prognostic significance of c-Met expression in glioblastomas. Cancer. 115(1): 140-8.
Other Notes	Small volumes of MET cell lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MET purchase	MBS8117230 is a cell lysate targeting MET. Also known as Canine c-MET HEK293 Overexpression Lysate. Host: HEK293 Cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MET. It may not necessarily be applicable to this product.

NCBI GI #	50950181
NCBI GeneID	403438
NCBI Accession #	NP_001002963.1
UniProt Primary Accession #	Q75ZY9
UniProt Secondary Accession #	A0M8U9
UniProt Related Accession #	Q75ZY9
GenBank Nucleotide #	NM_001002963.1
NCBI Official Full Name	hepatocyte growth factor receptor
NCBI Official Symbol	MET
NCBI Official Synonym Symbols	c-Met
UniProt Protein Name	Hepatocyte growth factor receptor
UniProt Synonym Protein Names	HGF/SF receptor; Proto-oncogene c-Met; Scatter factor receptor; SF receptor; Tyrosine-protein kinase Met
Protein Family	Hepatocyte growth factor receptor
UniProt Gene Name	MET
UniProt Synonym Gene Names	HGF receptor; SF receptor
UniProt Entry Name	MET_CANFA
NCBI Protein Information	hepatocyte growth factor receptor; SF receptor; HGF receptor; HGF/SF receptor; proto-oncogene c-Met; scatter factor receptor; tyrosine-protein kinase Met; met proto-oncogene tyrosine kinase

UniProt Comments for MET	Function: Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding to hepatocyte growth factor/HGF ligand. Regulates many physiological processes including proliferation, scattering, morphogenesis and survival. Ligand binding at the cell surface induces autophosphorylation of MET on its intracellular domain that provides docking sites for downstream signaling molecules. Following activation by ligand, interacts with the PI3-kinase subunit PIK3R1, PLCG1, SRC, GRB2, STAT3 or the adapter GAB1. Recruitment of these downstream effectors by MET leads to the activation of several signaling cascades including the RAS-ERK, PI3 kinase-AKT, or PLCgamma-PKC. The RAS-ERK activation is associated with the morphogenetic effects while PI3K/AKT coordinates prosurvival effects. During embryonic development, MET signaling plays a role in gastrulation, development and migration of muscles and neuronal precursors, angiogenesis and kidney formation. In adults, participates in wound healing as well as organ regeneration and tissue remodeling. Promotes also differentiation and proliferation of hematopoietic cells By similarity. Ref.4 Catalytic activity: ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate. Enzyme regulation: In its inactive state, the C-terminal tail interacts with the catalytic domain and inhibits the kinase activity. Upon ligand binding, the C-terminal tail is displaced and becomes phosphorylated, thus increasing the kinase activity By similarity. Subunit structure: Heterodimer made of an alpha chain (50 kDa) and a beta chain (145 kDa) which are disulfide linked. Binds PLXNB1. Interacts when phosphorylated with downstream effectors including STAT3, PIK3R1, SRC, PCLG1, GRB2 and GAB1. Interacts with SPSB1, SPSB2 and SPSB4. Interacts with INPP5D/SHIP1. When phosphorylated at Tyr-1357, interacts with INPPL1/SHIP2. Interacts with RANBP9 and RANBP10, as well as SPSB1, SPSB2, SPSB3 and SPSB4. SPSB1 binding occurs in the presence and in the absence of HGF, however HGF treatment has a positive effect on this interaction. Interacts with MUC20; prevents interaction with GRB2 and suppresses hepatocyte growth factor-induced cell proliferation. Interacts with GRB10 By similarity. Subcellular location: Membrane; Single-pass type I membrane protein By similarity. Domain: The kinase domain is involved in SPSB1 binding By similarity.The beta-propeller Sema domain mediates binding to HGF By similarity. Post-translational modification: Autophosphorylated in response to ligand binding on Tyr-1235 and Tyr-1236 in the kinase domain leading to further phosphorylation of Tyr-1350 and Tyr-1357 in the C-terminal multifunctional docking site By similarity.Dephosphorylated by PTPRJ at Tyr-1350 and Tyr-1366 By similarity.Ubiquitinated. Ubiquitination by CBL regulates the receptor stability and activity through proteasomal degradation By similarity. Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family.Contains 3 IPT/TIG domains.Contains 1 protein kinase domain.Contains 1 Sema domain.
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